

What is claimed is:

1 1(original). A direct sequence code division multiple access receiver
2 comprising an adaptive filter controlled by an adaptive algorithm for filtering
3 data which has been multiplied by a spreading code and filtered by a channel
4 filter, the adaptive filter having a length appropriate to model the inverse of the
5 channel filter, and a multiuser detector operating on the output of the adaptive
6 filter.

1 2(original). A receiver according to claim 1, wherein the algorithm is trained
2 using the signal of a desired user.

1 3(previously presented). A receiver according to claim 1, wherein the
2 algorithm is trained using a composite signal from more than one user.

1 4(previously presented). A receiver according to claim 1, wherein the
2 multiuser detector is of the minimum mean squared error type.

1 5(previously presented). A receiver according to claim 1, wherein the
2 multiuser detector is of the zero forcing (decorrelating) type.

1 6(previously presented). A receiver according to claim 1, wherein the
2 multiuser detector is of the Volterra type.

1 7(previously presented). A receiver according to claim 1, wherein the
2 multiuser detector is of the Radial Basis Function type.

1 8(previously presented). A receiver according to claim 1, wherein the
2 multiuser detector is of the cancellation type.

1 9(previously presented). A receiver according to claim 1, wherein the
2 multiuser detector is of the near optimum decoding type.

1 10(previously presented). A receiver according to claim 1, wherein the
2 algorithm comprises the least mean squares algorithm.

1 11(previously presented). A receiver according to claim 1, wherein the
2 algorithm comprises the recursive least squares algorithm.

1 12(previously presented). A receiver according to claim 1, wherein the
2 algorithm comprises the fast a-posteriori or sequential technique algorithm.

1 13(previously presented). A receiver according to claim 1, wherein the
2 algorithm comprises the stabilised fast a-posteriori error sequential technique
3 algorithm.

1 14(previously presented). A receiver according to claim 12, wherein said
2 algorithm is used in combination with the Fast Newton algorithm.

1 15(currently amended). A receiver according to claim 13, wherein said
2 algorithm is used in combination with the Fast Newton ~~newton~~ algorithm.

Insert the following new claim:

- 1 16(new). A direct sequence code division multiple access receiver
2 comprising:
3 an adaptive filter controlled by an adaptive algorithm for filtering data
4 ~~which has been multiplied by a spreading code and filtered by a channel filter;~~
5 wherein the adaptive filter has a length appropriate to model an inverse
6 of the channel filter; and,
7 a multiuser detector operating on the output of the adaptive filter,
8 wherein the adaptive filter is trained by new information at a chip rate at which
9 chip rate the spreading code is input.